Office Action Summary	Application No.	Applicant(s)	
	09/731,500	MASTRANGELO, GIUSEPPE	
	Examiner	Art Unit	
	Ted M. Wang	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/19/2007 has been entered.

Response to Arguments

2. Applicant's arguments, filed on 05/04/2007, have been fully considered but they are not persuasive. The Examiner has thoroughly reviewed Applicants' arguments but firmly believes that the cited reference to reasonably and properly meet the claimed limitations.

Claims 1-16

(1) *Applicants' argument* – "Applicant's measurements are derived without knowledge of a training signal cable slop, as set forth in Applicant's specification page 2, line 18. Clearly, it can be seen that Applicant's invention teaches away from the Kaku et al. patent which state at column 16, line 13: The slope of a straight line 35 connecting two Nyquist frequency signals is calculated by differentiating the Nyquist frequency signals 32 and 33. The slope of the straight line 35 indicates the tendency of the frequency characteristic of a receive signal, so that it can be judged whether the level of a high group is attenuated or the

level of a low group is attenuated. That is, it can be decided how the frequency characteristic of the receive signal are deteriorated from positive/negative and large/small of the differential between the Nyquist frequency signals."

Examiner's response –

The slope 35 as described in Kaku et al. patent, column 16, lines 13-23, are the calculation results of the level calculation unit (column 11 lines 12-27, column 23 line 42 – column 24 line 11) and used by the line equalizer control unit to extracts tone signal 32 and 33 (column 15 lines 34-50). The cited paragraph, column 16 lines 13-23, of the Kaku's reference does teach that the measurements require the knowledge of the training signal cable slop. Instead, the training signal cable slop is the calculation results of the power level of the received signal.

(2) *Applicants' argument* – "In contrast, in Applicant's invention the signal used for error correction is the same as that used to generate the audio/video for display to the user, that is, the signal transmitted from the broadcaster does not have other frequencies, such as the Nyquist frequency, added or superimposed thereon, as in the Kaku et al. patent." as recited in page 9-10 of the Remark, dated 05/04/2007.

Examiner's response –

Kuka et al. patent shows that the signal used for error correction is the same as that used to generate the audio/video for display to the user. The Nyquist frequency, added on or superimposed, is used to calculate and correct the amplitude error of the received input signal. That is, the error correction is using the received input signal from the transmitter. And the signal being used to generate the audio/video for display to the user is also using the received input signal.

Thus, for the explanation addressed in the above paragraph, the rejection under 35 U.S.C. 102(e) with Kaku's reference is adequate.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-9, 11, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter).

- With regarding claim 1, Kaku teaches a method of installation of a receiver to receive broadcast data transmitted from a broadcaster (Fig.5 elements 41 and 44 and column 13 lines 26-30) for use to generate audio and/or video at each

receiver broadcast continuously to a plurality of locations including the location of the receiver (col. 3, lines 21-32, col. 4, lines 7-10), said method comprising: measuring the power level of the broadcast data signals (column 13 lines 1-32, where Kaku teaches transmitting and receiving image information or data that is a video picture information between two modems) at two predetermined spaced points on the signal band by measuring the content of automatic gain control converters relating to said broadcast data signal within the receiver (col. 4, lines 11-19, col. 8, lines 17-21), providing an amplitude correction filter which can be selectively operated on said broadcast data signal to allow the correction of amplitude variations with frequency, the selective operation of the filter dependent upon and responsive to the power level measurements obtained (col. 8, lines 29-34) from the signal transmitted from the broadcaster without having knowledge of a training signal cable slope (refer to argument addressed in the above paragraph), and wherein the broadcast data signal used for the measurement of the content is the same as that used to generate the audio and/or video at the receiver locations for display at the receiver location for the purpose of viewing the display. (Column 16, lines 29-36, of the Kaku's reference specifically teaches that the measurement is using the actual data without training (test) signal. In fact, Kaku's invention is so designed to solve the issue that using the training signal is time consuming and it is impossible to start transmitting data immediately after trunk connection (column 3 lines 21-26) for a communication system which includes plural modems connected in parallel on a

receiving side to broadcast data from a transmission side modem. In addition, any received broadcast signal will be no longer an actual broadcast signal generated by transmitter since the noise or other broadcast signals can interfere with the broadcasted signal used to generate video/audio and displayed to the user.

- With regard claim 2, Kaku further teaches wherein obtaining the power level measurements occurs automatically and is followed by any required correction as pad of an automatic installation procedure (col. 4, lines 7-10 and col. 36, lines 13-21).
- With regard claim 3, Kaku further teaches wherein two measurements are taken, referred to as the high end signal and the low end signal (col. 8, lines 17-21).
- With regard claim 5, Kaku further teaches wherein if the difference in power level between the points is greater than a predetermined level then the power level to said broadcast data receiver is adjusted so that the incoming signal is within a known power range (col. 25, lines 6-19).
- With regard claim 6, Kaku further teaches the method utilizes the ability to use relative signal power level rather than absolute power level to install the receiver (col. 8, lines 29-34).
- With regard claim 7, Kaku teaches an apparatus for receiving broadcast digital data for use to generate audio and/or video at each receiver which is transmitted and received by the apparatus and passed to the receiver via an radio frequency

input from the data carrying network (col. 3, lines 21-32 and col. 4, lines 7-10), said receiver comprising:

a linearization circuit which can be selectively activated to operate with the receiver control system upon comparison of measurements of the power levels at two predetermined points on the signal transmitted from a broadcaster (Fig.5 elements 41 and 44 and column 13 lines 26-30) passed to the radio frequency input without having knowledge of a training signal cable slope (refer to argument addressed in the above paragraph) and, if the comparison reveals a difference which is greater than a predetermined level, the linearization circuit is activated to adjust the receiver settings during an installation procedure for the broadcast data receiver at a location at which the receiver is to be subsequently used (col. 8, lines 17-21 and 29-34 and col. 25, lines 2-19), and wherein the broadcast data signal used for the measurement of the content is the same as that used to generate the audio and/or video at the receiver locations for display at the receiver location for the purpose of viewing the display. (Column 16, lines 29-36, of the Kaku's reference specifically teaches that the measurement is using the actual data without training (test) signal. In fact, Kaku's invention is so designed to solve the issue that using the training signal is time consuming and it is impossible to start transmitting data immediately after trunk connection (column 3 lines 21-26) for a communication system which includes plural modems connected in parallel on a receiving side to broadcast data from a transmission side modem. In addition, any received broadcast signal will be no longer an

actual broadcast signal generated by transmitter since the noise or other broadcast signals can interfere with the broadcasted signal used to generate video/audio and displayed to the user."

- With regard claim 8, Kaku further teaches wherein said receiver is connected to a data supply network in which the data is carried by a cable network (col. 1, lines 4-6).
- With regard claim 9, Kaku further teaches wherein said linearization circuit is selectively activated automatically by said receiver control system upon specified criteria for activation being met (col. 25, lines 2-19).
- With regard claim 11, Kaku further teaches wherein said linearization circuit performs cable slope correction internally in said broadcast data receiver and this can be applied to improve the performance of the broadcast data receiver at the location of installation (col. 25, lines 6-19).
- With regard claim 14, Kaku teaches a method of installation of a receiver to receive digital data for use to generate audio and/or video at each receiver which is broadcast to the location of the receiver (col. 3, lines 21-32, col. 4, lines 7-10), said method comprising:

measuring the power level of incoming frequency signals at two predetermined spaced points on the signal band (col. 4, lines 11-19, col. 8, lines 17-34, col. 10, lines 29-37, col.11 lines 12-27, col. 17, lines 8-18, and col. 23, line 42 – col. 24 line 11, and Fig.19 element 6, REF1 and REF2),

providing means for the comparison of the measurements without having knowledge of a training signal cable slope (refer to argument addressed in the above paragraph) and if the comparison shows a value within a predetermined parameter an indication is provided to the installer and if the comparison shows a value out with the predetermined parameter a control system in the receiver adjusts the operation of one or a combination of components within the receiver until the value is within the predetermined parameter (col. 8, lines 17-24, col. 25, lines 2-19, Fig.3 and 9, where the compared signal from adder 6 output is integrated 8 and feedback to the LEQ for correction and the operation is repeated until the value is within the predetermined parameter), and wherein the broadcast data signal used for the measurement of the content is the same as that used to generate the audio and/or video at the receiver locations for display at the receiver location for the purpose of viewing the display. (Column 16, lines 29-36, of the Kaku's reference specifically teaches that the measurement is using the actual data without training (test) signal. In fact, Kaku's invention is so designed to solve the issue that using the training signal is time consuming and it is impossible to start transmitting data immediately after trunk connection (column 3 lines 21-26) for a communication system which includes plural modems connected in parallel on a receiving side to broadcast data from a transmission side modem. In addition, any received broadcast signal will be no longer an actual broadcast signal generated by transmitter since the noise or

other broadcast signals can interfere with the broadcasted signal used to generate video/audio and displayed to the user."

- With regard claim 15, Kaku further teaches wherein the control system adjusts the operation with reference to at least one algorithm in the control system (col. 25, lines 2-19, Figs. 24, 25, 27).

Claim Rejections – 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 12, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter) in view of Bazes et al. (U.S. Patent No. 5,991,339, "Bazes" hereinafter).

- With regard claims 12 and 16, Kaku teaches the claimed invention (see the rationale applied to claims 11 and 14 above), but does not particularly teach changing the values of the inductors, capacitors and/or resistors to obtain one of a number of equalization slopes to bring the difference between the high end signal and low end signal within a specific margin.

  However, the use of adjustable inductors, capacitors and/or resistors to control the frequency response of an equalizer is well known in the art. Bazes

teaches an adaptive equalizer that can adapt to various transmission medium lengths and signal degradation levels (abstract). The transfer function of the equalizer may be controlled by the adjustment signal that specified the resistance value (col. 2, lines 63-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the values of resistors to control the frequency response of the equalizer such that the equalizer can adapt to various transmission medium lengths and signal degradation levels.

- With regard claim 13, Kaku in view of Bazes does not teach that the specific criteria is for a difference between the high end and the low end signal values greater than 10 dB. However, the selection of the difference value as the specific criteria would not change the operation of the system of Kaku/Bazes. Such value is arbitrarily selectable to meet the system requirement such as error tolerance of the error caused by attenuation. Therefore, the claimed value of 10 dB is clear a matter of design choice, dictated by the system requirement and user's need.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter) in view of Leung et al. (U.S. Patent No. 6,542,540, "Leung" hereinafter).

- With regard claim 4, Kaku teaches the claimed invention (see the rationale applied to claim 1 above), but does not particularly teach that no linearization via

the filter is performed if the high end signal level is greater than the low end signal level.

However, whether to perform linearization for a particular situation is merely a design option, dictated by the user's error tolerance for the error caused by the attenuation. Leung teaches that high frequency boost is not required when the high frequency attenuation is relatively small (col. 6, lines 1-3). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made not to perform linearization when the high frequency is small, so as to reduce the cost and initialization of the modem.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaku et al. (EP 0798875, listed in the IDS filed 4/20/01, "Kaku" hereinafter) in view of Porter et al. (U.S. Patent No. 6,167,081, "Porter" hereinafter)

- With regard claim 10, Kaku teaches the claimed invention (see the rationale applied to claim 8 above), but does not particularly teach that the install activates the linearization circuit upon receiving an indication that specified criteria have been met. However, such feature is well known in the art. Porter teaches a receiver that activates the equalizer when receiving an indication that specified criteria has been met (col. 6, lines 50-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the feature of activating linearization circuit as claimed, so as to activate the linearization circuit only when required and consequently to save the cost and time caused by the linearization circuit.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M Wang
Examiner
Art Unit 2611

Ted M. Wang